



Photo courtesy of Tarrant
Regional Water District

9

Implementation and funding of the 2012 State Water Plan

Chapter 9 ♦ Water for Texas
2017 State Water Plan
Texas Water Development Board

Quick facts

Regional water planning groups are required to help evaluate the state's progress toward meeting future water needs by assessing the previously recommended state water plan strategies that have been implemented. In 2011, the 82nd Texas Legislature passed Senate Bill 660—the TWDB's sunset bill, requiring the planning groups and the TWDB to report on state water plan projects funded since adoption of the previous state water plan. This is the first state water plan to incorporate that information.

9.1 Implementation of the 2012 State Water Plan

Planning groups reported on the implementation of water management strategies from the 2012 State Water Plan in their 2016 regional water plans. By surveying specific project sponsors, planning groups attempted to determine the extent to which each water management strategy may have been implemented. The surveys included strategies such as conservation, which do not require significant new water infrastructure. Planning groups also attempted to gauge the degree to which sponsors had moved water infrastructure projects toward planning, design, or construction phases.

The survey focused on basic information, like whether a strategy was implemented or not, and on information regarding incremental steps that may have been taken toward initial implementation, such as permitting.

Since water management strategies, particularly those that involve infrastructure projects, can require several years or more to fully implement, strategy progress was defined in two ways:

1. **Implemented**, when a strategy is fully capable of meeting water needs in the manner planned.
2. **Progress toward implementation**, which includes any type of implementation step

Regional water planning groups reported that approximately 440 water management strategies in the 2012 State Water Plan were either partially or fully implemented, representing approximately 14 percent of the total number (approximately 3,100) of recommended strategies.

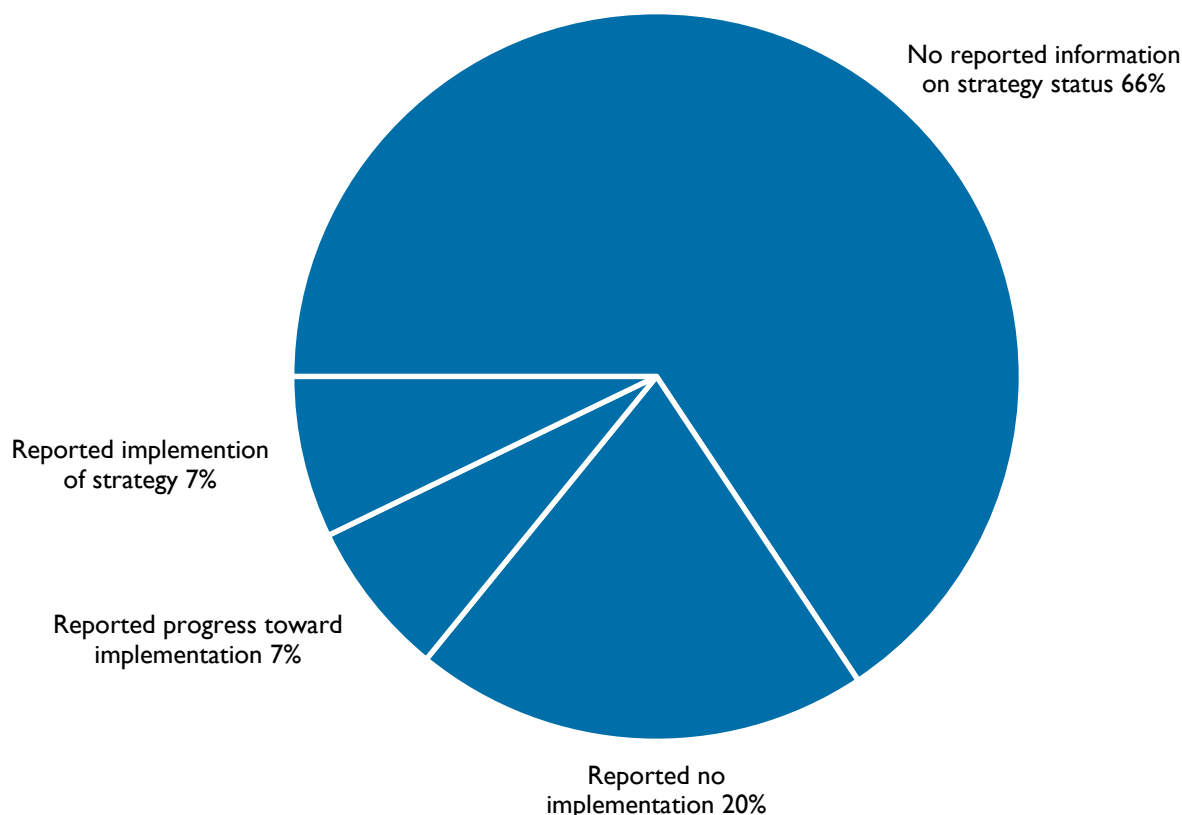
Of the total estimated \$55.7 billion in project costs in the 2012 State Water Plan, approximately \$1.9 billion was funded through the TWDB's financial assistance programs and is associated with 60 projects and over 1 million acre-feet of additional annual water supply.

(including start of project construction or pre-implementation activity such as negotiating contracts, applying for and securing financing or state and federal permits, or conducting preliminary engineering studies) or achievement of a portion of the total anticipated conservation savings from a strategy.

Statewide implementation progress is represented by the relative count of strategies compared to the total number of recommended strategies (approximately 3,100) in the 2012 State Water Plan⁵ (Figure 9.1). Of the approximately 1,060 strategies for which the planning groups reported information, 41 percent reported at least some form of progress on strategy implementation. Of these, half were reported as being fully implemented. Strategies reported as fully implemented represent about 7 percent of the total number of recommended water management strategies in the 2012 State Water Plan, while strategies reported as only partially implemented represent about 7 percent of the total number of strategies.

⁵ The count of water management strategies and the capital cost of projects associated with the 2012 State Water Plan include amendments to the plan.

Figure 9.1 - Reported implementation of all recommended water management strategies from the 2012 State Water Plan by share of total number of strategies



Planning groups reported that strategies only partially implemented represent approximately 28 percent of the \$55.7 billion in total capital costs associated with the 2012 State Water Plan. Strategies reported as fully implemented represent approximately 9 percent of the total capital costs associated with recommended water management strategies in the 2012 State Water Plan.

9.2 Funding of the 2012 State Water Plan

Since adoption of the 2012 State Water Plan, the TWDB has closed⁶ on approximately \$3.9 billion in financial assistance, of which approximately \$1.9 billion was associated with state water plan projects, as of December 2015 (Table 9.1). Additionally, as of December 2015, the TWDB has

⁶ The TWDB first approves a commitment for financial assistance. After all appropriate reviews and requirements are met, funds are released at closing.

committed to funding approximately \$3.9 billion from the State Water Implementation Fund for Texas (SWIFT) program over the next 10 years for state water plan projects, which includes the amount closed for the 2012 State Water Plan projects funded through SWIFT. In addition to the SWIFT program, the TWDB funded the recommended water management strategies through several different funding programs, including the Water Infrastructure Fund, the State Participation Program, the Economically Distressed Areas Program, the Texas Water Development Fund, the Water Assistance Fund, the Rural Water Assistance Fund, and the Drinking Water State Revolving Fund.

A variety of types of water management strategies have been implemented with TWDB funding since adoption of the 2012 State Water Plan, including groundwater desalination; new groundwater wells; direct potable reuse; transmission and treatment facilities; and planning, design, and permitting of new reservoirs (Table 9.1).

Table 9.1 - 2012 State Water Plan projects funded since November 2011 by project sponsor (page 1 of 3)

Map reference	Entity	Project	Financial assistance features			Closed loan amount	Associated annual water supply (acre-foot per year) ^a
			State water plan funding	State Participation	Other state and federal funding programs		
1	Airline Improvement District	Service zone 1 water and wastewater			x	\$5,361,916	504
2	Baylor Water Supply Corporation	Millers Creek water supply			x	\$575,000	83
3	Bedford	Conservation - water distribution system improvements	x			\$30,000,000	2,716
4	Brazosport Water Authority	Brackish groundwater reverse osmosis water treatment plant and wells	x			\$5,605,000	3,000
5	Bronte	Regional water service			x	\$488,625	500
6	Canyon Regional Water Authority	Wells Ranch phase II - well field and transmission line	x			\$42,000,000	7,800
7	Central Harris County Regional Water Authority	2nd source transmission line phase I & phase II (84" & 108"); Northeast water purification plant expansion	x			\$10,805,000	5,470
8	Cleburne	Lake Whitney water supply project	x			\$2,380,000	2,128
9	Coastal Water Authority	Luce Bayou interbasin transfer project	x			\$66,565,000	358,447
10	Coastal Water Authority	Luce Bayou interbasin transfer		x		\$28,754,000	358,447
11	D Bar B Water and Wastewater Supply Corporation	Groundwater well treatment/replacement			x	\$200,000	-
12	East Aldine Management District	Sherwood and Benton Place water and sewer			x	\$10,486,094	192
13	El Paso County Tornillo Water Improvement District	Arsenic removal system			x	\$45,000	-
14	El Paso Water Utilities Public Service Board	Canutillo Area water and wastewater			x	\$412,730	29
15	El Paso Water Utilities Public Service Board	Land and water rights acquisition	x			\$50,000,000	20,000
16	Eules	Automated metering and leak detection			x	\$5,493,050	660
17	Eules	Bear Creek reclaimed water system			x	\$2,755,300	368
18	Fort Bend County Water Control and Improvement District # 8	Water well and generator			x	\$490,000	242
19	Fort Worth	Conservation - advanced metering infrastructure project	x			\$13,000,000	9,450
20	Greater Texoma Utility Authority	Gainesville surface water treatment plant expansion	x			\$1,135,000	1,120

^a Water volumes may also be associated with other projects.

Table 9.1 - 2012 State Water Plan projects funded since November 2011 by project sponsor (page 2 of 3)

Map reference	Entity	Project	Financial assistance features			Closed loan amount	Associated annual water supply (acre-foot per year) ^a
			State water plan funding	State Participation	Other state and federal funding programs		
21	Greater Texoma Utility Authority	Sherman water treatment plant expansion and upgrade/ elevated storage tank			×	\$29,825,000	11,120
22	Greater Texoma Utility Authority	Van Alstyne Colin Grayson Municipal Alliance connection			×	\$3,360,000	728
23	Greater Texoma Utility Authority, City of Tom Bean	Supplemental water well and appurtenances	×			\$1,210,000	325
24	Guadalupe-Blanco River Authority	Integrated water and power plant project	×			\$2,000,000	28,000
25	Guadalupe-Blanco River Authority	Mid-basin project	×			\$4,400,000	25,000
26	Hays Caldwell Public Utility Agency	Phase IA transmission line	×			\$7,490,000	5,489
27	Hidalgo County Irrigation District #1	Agricultural irrigation conveyance improvements	×			\$7,100,000	-
28	Honey Grove	Conservation - distribution line replacement			×	\$2,308,700	-
29	Houston	2nd source transmission line phase I (108"); Northeast water purification plant expansion	×			\$25,915,000	358,447
30	Kosse	New wells and elevated storage			×	\$449,000	350
31	Lone Star Regional Water Authority	East Williamson County regional water transmission system	×			\$27,640,000	11,762
32	Lower Colorado River Authority	Lower Basin Reservoir			×	\$253,700,000	90,000
33	Marfa	Additional water well	×			\$705,000	968
34	McAllen	Effluent reuse system			×	\$7,808,511	-
35	Menard	Surface water treatment plant and well improvements			×	\$1,087,000	150
36	Mission	Wastewater treatment plant expansion and reuse			×	\$16,140,000	2,240
37	Montgomery County Municipal Water District #8 and #9	Walden conjunctive use water treatment plant design			×	\$5,450,000	2,242
38	North Fort Bend Water Authority	Northeast water purification plant expansion; 2nd source transmission line (96")	×			\$8,670,000	84,426
39	North Harris County Regional Water Authority	2nd source transmission line phase I & phase II (84" & 108"); Northeast water purification plant expansion; Internal distribution system	×			\$80,435,000	126,585
40	Nueces County	Cyndie Park water improvements			×	\$200,000	-

^a Water volumes may also be associated with other projects.

Table 9.1 - 2012 State Water Plan projects funded since November 2011 by project sponsor (page 3 of 3)

Map reference	Entity	Project	Financial assistance features			Closed loan amount	Associated annual water supply (acre-feet per year) ^a
			State water plan funding	State Participation	Other state and federal funding programs		
41	Palo Pinto County Municipal Water District #1	Turkey Peak Reservoir	x			\$17,100,000	6,800
42	Parker County Special Utility District	Brazos River surface water treatment plant			x	\$2,000,000	1,120
43	Pharr	Purchase surface water rights			x	\$3,524,500	1,500
44	Pleasant Springs Water Supply Corporation	Water plant #2			x	\$1,135,000	484
45	Raymondville	Emergency well and reverse osmosis system			x	\$3,800,000	2,421
46	Robert Lee	Emergency pipeline and long-term plan			x	\$2,750,000	150
47	San Antonio Water System	Brackish groundwater desalination	x			\$50,000,000	13,440
48	San Antonio Water System	Water resources integration pipeline			x	\$75,920,000	55,982
49	San Jacinto River Authority	Water resources assessment plan			x	\$447,320,000	33,627
50	Shallowater	Water and wastewater improvements			x	\$4,100,000	450
51	Silverton	New water source			x	\$1,825,000	126
52	Somervell County Water District	Wheeler Branch Reservoir water treatment plan			x	\$1,400,000	1,680
53	Tarrant Regional Water District	Integrated transmission pipeline project with City of Dallas	x			\$440,000,000	392,077
54	Upper Trinity Regional Water District	Lake Ralph Hall Reservoir	x	x		\$44,680,000	33,604
55	Vista Verde Water Systems Inc.	New water well			x	\$200,000	81
56	West Harris County Regional Water Authority	2nd source transmission line (96"); Northeast water purification plant expansion	x			\$18,740,000	92,310
57	West Harris County Regional Water Authority	Second source project	x			\$41,965,000	92,310
58	White River Municipal Water District	Regional water system upgrade			x	\$2,610,000	4,000
59	Willis	Catahoula Aquifer wells			x	\$3,150,000	3,874
60	Willow Park	Water line replacement			x	\$685,000	100
Total						\$1,925,349,426	

^a Water volumes may also be associated with other projects.

Funding commitments (which may be larger than closed amounts shown in Table 9.1) for projects in the state water plan were associated with many different project sponsors, including cities, water supply corporations, and regional water providers throughout Texas (Figure 9.2).

Examples of the types of projects that the TWDB has funded through SWIFT include the following:

City of Fort Worth

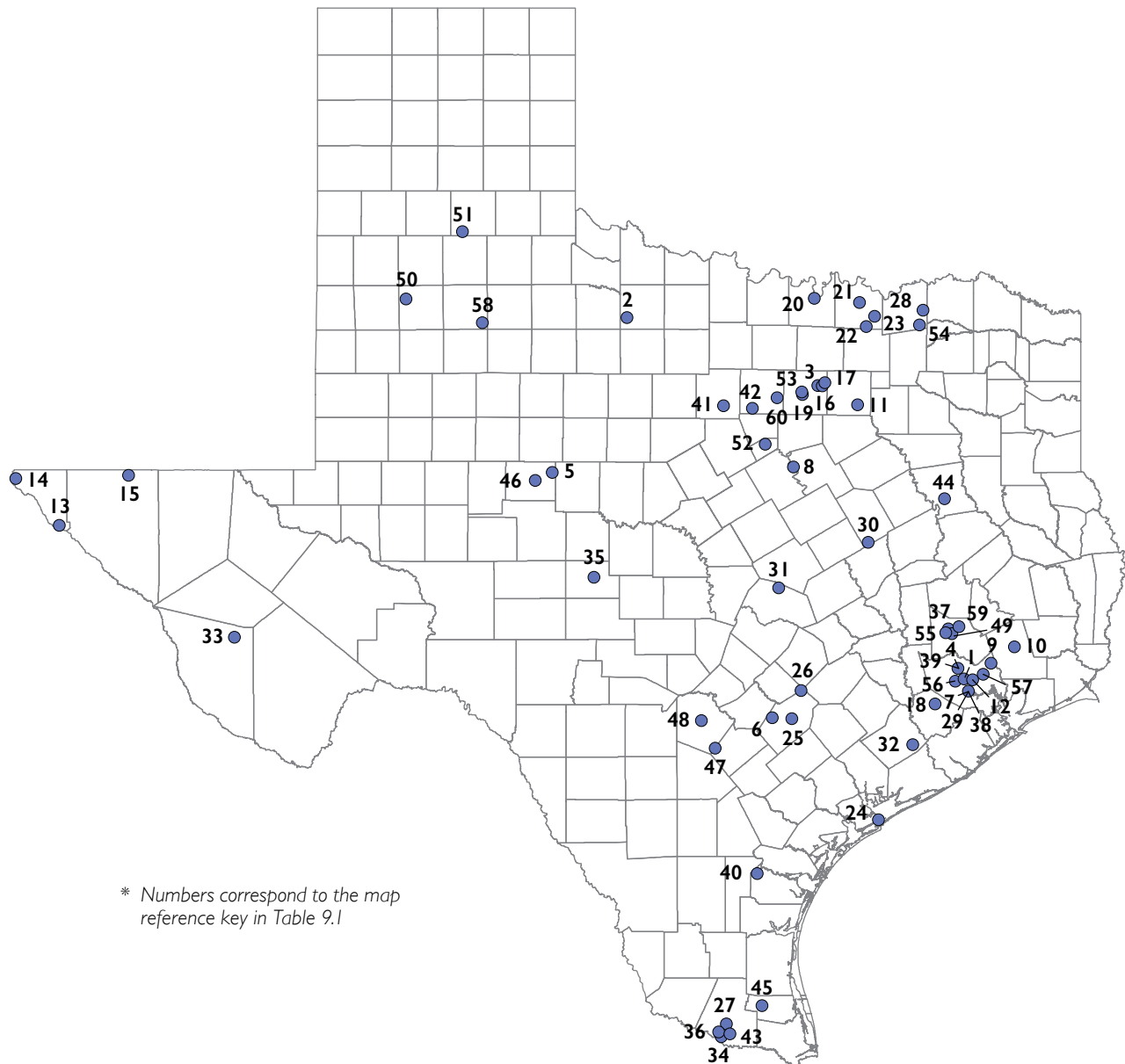
The City obtained a \$76 million loan commitment to implement a large meter replacement

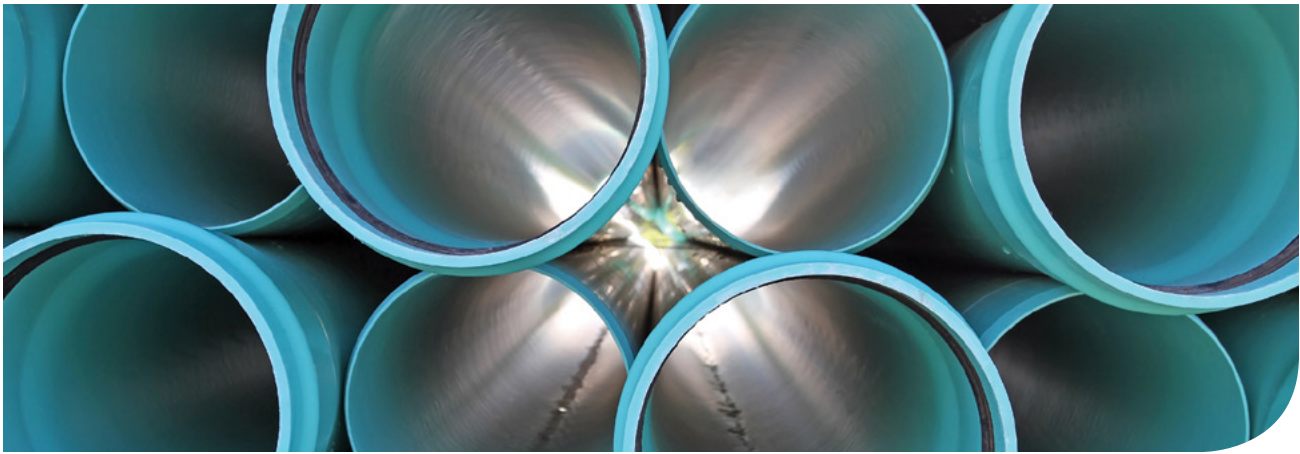
program that will provide the City of Fort Worth approximately 9,000 acre-feet per year in water savings.

Brazosport Water Authority

The Authority obtained a \$28.3 million loan commitment to implement the planning, design, and construction of a brackish groundwater reverse osmosis water treatment plant and water wells, which collectively will provide growing municipalities and industries in Brazoria County with approximately 3,000 acre-feet per year in additional water supply.

Figure 9.2 - Locations of 2012 State Water Plan projects funded by the TWDB, by project sponsor*





Blue pipes are used to transport potable water

Upper Trinity Regional Water District

The District obtained a \$44.7 million loan commitment to implement the planning, land acquisition, and design for Lake Ralph Hall, which will provide growing municipalities and industry in Fannin, Collin, Cooke, Dallas, Denton, Grayson, and Wise counties with approximately 34,000 acre-feet per year in additional water supply. The project will rely on initial Board Participation in ownership of a portion of the project.

City of Marfa

The City obtained a \$705,000 loan commitment to implement the planning, design, and construction of a new water well that will provide the city with approximately 1,000 acre-feet per year in additional water supply.

Houston area regional water supply projects

The City of Houston, the Coastal Water Authority, the North Harris County Regional Water Authority, the Central Harris County Regional Water Authority, the West Harris County Regional Water Authority, and the North Fort Bend Water Authority obtained a total of \$2.96 billion in multi-year commitments to implement the planning, design, and construction of several interrelated, regional projects. The projects include the Luce Bayou transfer project, a massive water treatment plant expansion that will serve all the entities, as well as major shared transmission pipelines and pump stations delivering water to each of

the participants. The project will provide approximately 358,000 acre-feet per year in additional water supplies to municipal and industrial water users throughout Harris and Fort Bend counties.

El Paso Water Utilities

El Paso Water Utilities obtained a \$50 million loan commitment to acquire land and associated groundwater rights for future development. Once developed, the well field will provide El Paso and its customers with approximately 20,000 acre-feet per year in additional water supply.

Tarrant Regional Water District

The District obtained a \$440 million loan commitment to implement the design and construction and to acquire land for an integrated pipeline in partnership with the City of Dallas that will provide the growing municipalities in Collin, Dallas, and Wise counties with approximately 392,000 acre-feet per year in additional water supply.

Palo Pinto County Municipal Water District No. 1

The District obtained a \$17.1 million loan commitment to implement the planning and design and to acquire land for the Turkey Peak Reservoir that will provide municipalities and industries in Palo Pinto and Parker counties with approximately 7,000 acre-feet per year in additional water supply.